



Name: \_\_\_\_\_  
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Geometry, Period \_\_\_\_\_  
Due Date: Tues, 25 Nov 2014

HW60\_Product\_vs\_Power\_Exponent\_Rules

**Geometry  
Homework**

**Exponent Rules**

Form A

Use laws of exponents and simplify. Write your answers in positive exponents.

1) $\frac{p^2}{p^6}$ When dividing with the same base you <u>subtract</u> the smaller exponent from the larger exponent $\frac{1}{p^{(6-2)}} =$	2) $c^6 \cdot c^5$ when multiplying by the same base you <u>add</u> the exponents $c^{(6+5)} =$	3) $(h^9)^{10}$ when a power is raised to another power you multiply exponents $h^{(9 \cdot 10)} =$
4) $(y^2)^9$	5) $w^4 \cdot w^7$	6) $\frac{a^{10}}{a^2}$
7) $(b^{10})^8$	8) $n^2 \cdot n^{10}$	9) $(p^4)^6$
13) $\frac{w^9}{w^3}$	14) $u^7 \cdot u^6$	15) $\frac{z^7}{z^6}$

# Exponent Rules

Use laws of exponents and simplify. Write your answers in positive exponents.

1) $\left(\frac{x^7y^3}{x^2y}\right)^4$	2) $(a^3b)^4(ab^6)^2$	3) $\left(\frac{8m^5n^7}{2mn^5}\right)^3$
4) $(5p^3q^2)(2p^4q)^2$	5) $\frac{(8k^{-5})(2k^3)}{4k^{-6}}$	6) $(b^{-3}c^{-7})^{-2}(b^3c^{-2})^{-3}$
7) $\left(\frac{6lm^2}{3l^3m^6}\right)^2$	8) $\left(\frac{2r^{-5}s^6}{r^3s^4}\right)(3r^9s^{-4})$	9) $(u^{-3}v^5)\left(\frac{9u^{-5}v^2}{3u^6v^{-8}}\right)$
10) $\frac{8v^5w^{-6}}{(2v^{-3}w^2)(v^6w)}$	11) $\left(\frac{3s^{-2}t^7}{6s^3t^{-5}}\right)^{-4}$	12) $(3l^{-2}m^3)(2m^{-5})^2(lm^4)^{-3}$
13) $(4u^2v)^{-3}(u^{-5}v^6)^2(u^{-8}w^{-9})$	14) $\left(\frac{6x^{-3}y^5}{2xy^2z^6}\right)^5$	15) $\frac{(2a^{-3}b)(6b^5c^{-7})}{4c^{-9}}$